

## SEQUENCE LISTING

<110> TOOLGEN, INC.

<120> REGULATION OF PROKARYOTIC GENE  
EXPRESSION WITH ZINC FINGER PROTEINS

<130> PCA41174-TG1

<150> US 60/532,362

<151> 2003-12-23

<160> 157

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 23

<212> PRT

<213> Homo sapiens

<400> 1

Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu

1 5 10 15

Thr Arg His Gln Arg Ile His

20

<210> 2

<211> 23

<212> PRT

<213> Homo sapiens

<400> 2

Phe Lys Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu

1 5 10 15

Val Arg His Gln Arg Thr His

20

<210> 3

<211> 24

<212> PRT

<213> Homo sapiens

<400> 3

Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu

1 5 10 15

Gln Arg His Val Arg Asn Ile His

20

<210> 4  
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<213> Homo sapiens

<400> 4  
Tyr Thr Cys Ser Tyr Cys Gly Lys Ser Phe Thr Gln Ser Asn Thr Leu  
1 5 10 15  
Lys Gln His Thr Arg Ile His  
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<210> 5  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 5  
Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu  
1 5 10 15  
Arg Arg His Gly Arg Thr His  
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<210> 6  
<211> 24  
<212> PRT  
<213> Homo sapiens

<400> 6  
Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu  
1 5 10 15  
Gln Arg His Val Arg Asn Ile His  
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<210> 7  
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<212> PRT  
<213> Homo sapiens

<400> 7  
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His  
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<210> 8  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 8  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15

Thr Arg His Arg Arg Ile His  
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<210> 9  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 9  
Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu  
1 5 10 15  
Ile Arg His Gln Arg Ile His  
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<210> 10  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 10  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
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<210> 11  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 11  
Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His  
20

<210> 12  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 12  
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15  
Thr Lys His Lys Lys Ile His  
20

<210> 13  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 13  
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His  
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<210> 14  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 14  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
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<210> 15  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 15  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
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<210> 16  
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<212> PRT  
<213> Homo sapiens

<400> 16  
Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
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<210> 17  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 17  
Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu  
1 5 10 15  
Thr Arg His Lys Arg Ile His  
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<210> 18  
<211> 23

<212> PRT

<213> Homo sapiens

<400> 18

Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
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<210> 19

<211> 23

<212> PRT

<213> Homo sapiens

<400> 19

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
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Asn Val His Arg Arg Ile His  
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<210> 20

<211> 23

<212> PRT

<213> Homo sapiens

<400> 20

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

<210> 21

<211> 23

<212> PRT

<213> Homo sapiens

<400> 21

Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu  
1 5 10 15  
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20

<210> 22

<211> 23

<212> PRT

<213> Homo sapiens

<400> 22

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
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20

<210> 23  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 23  
Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg Phe Thr Asp Arg Ser Ala Leu  
1 5 10 15  
Ala Arg His Lys Arg Thr His  
20 25

<210> 24  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 24  
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His  
20

<210> 25  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 25  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
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<210> 26  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 26  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

<210> 27  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 27  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu

1 5 10 15  
Thr Gln His Arg Arg Ile His  
20

<210> 28  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 28  
Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu  
1 5 10 15  
Thr Arg His Gln Arg Ile His  
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<210> 29  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 29  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

<210> 30  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 30  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
20

<210> 31  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 31  
Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His  
20

<210> 32  
<211> 23  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 32

Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

&lt;210&gt; 33

<211> 23  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 33

Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu  
1 5 10 15  
Arg Arg His Gly Arg Thr His  
20

&lt;210&gt; 34

<211> 23  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 34

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His  
20

&lt;210&gt; 35

<211> 23  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 35

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

&lt;210&gt; 36

<211> 23  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 36

Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

&lt;210&gt; 37

<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 37  
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His  
20

<210> 38  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 38  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
20

<210> 39  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 39  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

<210> 40  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 40  
Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

<210> 41  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 41  
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His

20

&lt;210&gt; 42

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 42

Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15Thr Lys His Lys Lys Ile His  
20

&lt;210&gt; 43

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 43

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15Thr Arg His Arg Arg Ile His  
20

&lt;210&gt; 44

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 44

Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu  
1 5 10 15Thr Arg His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Lys Cys Pro  
20 25 30Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu Val Arg His Gln  
35 40 45Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Lys Tyr Cys Asp Arg  
50 55 60Ser Phe Ser Ile Ser Ser Asn Leu Gln Arg His Val Arg Asn Ile His  
65 70 75 80

&lt;210&gt; 45

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 45

Tyr Thr Cys Ser Tyr Cys Gly Lys Ser Phe Thr Gln Ser Asn Thr Leu  
1 5 10 15  
Lys Gln His Thr Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Lys  
20 25 30  
Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu Arg Arg His Gly  
35 40 45  
Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Lys Tyr Cys Asp Arg  
50 55 60  
Ser Phe Ser Ile Ser Ser Asn Leu Gln Arg His Val Arg Asn Ile His  
65 70 75 80

&lt;210&gt; 46

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 46

Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu  
1 5 10 15  
Gln Arg His Val Arg Asn Ile His Thr Gly Glu Lys Pro Phe Gln Cys  
20 25 30  
Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His  
35 40 45  
Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly  
50 55 60  
Lys Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His  
65 70 75 80  
Thr Gly Glu Lys Pro Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser  
85 90 95  
Val Ser Ser Thr Leu Ile Arg His Gln Arg Ile His  
100 105

&lt;210&gt; 47

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 47

Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp  
20 25 30  
His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu Asn Val His Arg  
35 40 45  
Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys

50                    55                    60  
Ala Phe Thr Gln Ser Ser Asn Leu Thr Lys His Lys Lys Ile His Thr  
65                    70                    75                    80  
Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln  
                          85                    90                    95  
Ser Ser Asn Leu Thr Lys His Lys Lys Ile His  
                          100                    105

&lt;210&gt; 48

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 48

Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1                    5                    10                    15  
Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp  
                          20                    25                    30  
His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys  
                          35                    40                    45  
Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys  
                          50                    55                    60  
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr  
65                    70                    75                    80  
Gly Glu Lys Pro Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln  
                          85                    90                    95  
Ser Ser Ser Leu Ile Arg His Gln Arg Thr His  
                          100                    105

&lt;210&gt; 49

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 49

Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu  
1                    5                    10                    15  
Thr Arg His Lys Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Asp  
                          20                    25                    30  
His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys  
                          35                    40                    45  
Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp His Cys Gly Lys  
                          50                    55                    60  
Ala Phe Ser Val Ser Ser Asn Leu Asn Val His Arg Arg Ile His Thr  
65                    70                    75                    80  
Gly Glu Lys Pro Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln

85 90 95  
Ser Ser His Leu Asn Val His Lys Arg Thr His  
100 105

<210> 50  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetically generated peptide

<400> 50  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met  
20 25 30  
Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln  
35 40 45  
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys  
50 55 60  
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr  
65 70 75 80  
Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln  
85 90 95  
Ser Thr His Leu Thr Arg His Arg Arg Ile His  
100 105

<210> 51  
<211> 109  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetically generated peptide

<400> 51  
Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg Phe Thr Asp Arg Ser  
1 5 10 15  
Ala Leu Ala Arg His Lys Arg Thr His Thr Gly Glu Lys Pro Phe Gln  
20 25 30  
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr  
35 40 45  
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp His Cys  
50 55 60  
Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys Arg Thr  
65 70 75 80  
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe  
85 90 95  
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His  
100 105

<210> 52  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetically generated peptide

<400> 52  
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Gln His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met  
20 25 30  
Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln  
35 40 45  
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys  
50 55 60  
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr  
65 70 75 80  
Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln  
85 90 95  
Ser Thr His Leu Thr Arg His Arg Arg Ile His  
100 105

<210> 53  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetically generated peptide

<400> 53  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp  
20 25 30  
His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu Asn Val His Arg  
35 40 45  
Arg Ile His Thr Gly Glu Lys Pro Phe Glu Cys Lys Asp Cys Gly Lys  
50 55 60  
Ala Phe Ile Gln Lys Ser Asn Leu Ile Arg His Gln Arg Thr His Thr  
65 70 75 80  
Gly Glu Lys Pro Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys  
85 90 95  
Pro Ser Asn Leu Arg Arg His Gly Arg Thr His  
100 105

<210> 54  
<211> 107  
<212> PRT  
<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 54

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys His  
20 25 30  
Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg  
35 40 45  
Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Pro Asp Cys Gly Lys  
50 55 60  
Ser Phe Ser Gln Ser Ser Leu Ile Arg His Gln Arg Thr His Thr  
65 70 75 80  
Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg  
85 90 95  
Ser Asp His Leu Lys Thr His Thr Arg Thr His  
100 105

&lt;210&gt; 55

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

&lt;400&gt; 55

Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asp  
20 25 30  
His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His Lys  
35 40 45  
Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys  
50 55 60  
Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr  
65 70 75 80  
Gly Glu Lys Pro Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln  
85 90 95  
Lys Ser Asn Leu Ile Arg His Gln Arg Thr His  
100 105

&lt;210&gt; 56

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetically generated peptide

<400> 56

Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg Phe Thr Asp Arg Ser  
1 5 10 15  
Ala Leu Ala Arg His Lys Arg Thr His Thr Gly Glu Lys Pro Phe Gln  
20 25 30  
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr  
35 40 45  
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys  
50 55 60  
Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu Thr Lys His Lys Lys Ile  
65 70 75 80  
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe  
85 90 95  
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His  
100 105

<210> 57

<211> 13

<212> PRT

<213> Simian parainfluenza virus 5

<400> 57

Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser  
1 5 10

<210> 58

<211> 89

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 58

Glu Arg Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser  
1 5 10 15  
Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr Gly Gln Lys  
20 25 30  
Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His  
35 40 45  
Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys  
50 55 60  
Asp Ile Cys Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg Lys Arg His  
65 70 75 80  
Thr Lys Ile His Leu Arg Gln Lys Asp  
85

<210> 59

<211> 28

<212> PRT

<213> Artificial Sequence



20

&lt;210&gt; 63

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 63

Tyr	Thr	Cys	Ser	Asp	Cys	Gly	Lys	Ala	Phe	Arg	Asp	Lys	Ser	Cys	Leu
1				5					10					15	
Asn	Arg	His	Arg	Arg	Thr	His									
				20											

&lt;210&gt; 64

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 64

Tyr	Lys	Cys	Lys	Glu	Cys	Gly	Lys	Ala	Phe	Asn	His	Ser	Ser	Asn	Phe
1				5					10					15	
Asn	Lys	His	His	Arg	Ile	His									
				20											

&lt;210&gt; 65

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 65

Phe	Lys	Cys	Pro	Val	Cys	Gly	Lys	Ala	Phe	Arg	His	Ser	Ser	Ser	Leu
1				5					10					15	
Val	Arg	His	Gln	Arg	Thr	His									
				20											

&lt;210&gt; 66

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 66

Tyr	Arg	Cys	Lys	Tyr	Cys	Asp	Arg	Ser	Phe	Ser	Ile	Ser	Ser	Asn	Leu
1				5					10					15	
Gln	Arg	His	Val	Arg	Asn	Ile	His								
				20											

&lt;210&gt; 67

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 67

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Ile Gly Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His  
20

<210> 68  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 68  
Tyr Gly Cys His Leu Cys Gly Lys Ala Phe Ser Lys Ser Ser Asn Leu  
1 5 10 15  
Arg Arg His Glu Met Ile His  
20

<210> 69  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 69  
Tyr Lys Cys Lys Glu Cys Gly Gln Ala Phe Arg Gln Arg Ala His Leu  
1 5 10 15  
Ile Arg His His Lys Leu His  
20

<210> 70  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 70  
Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu  
1 5 10 15  
Arg Arg His Glu Arg Thr His  
20

<210> 71  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 71  
Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu  
1 5 10 15  
Leu Arg His Ile Lys Leu His  
20

<210> 72  
<211> 23  
<212> PRT

<213> Homo sapiens

<400> 72

Tyr Ala Cys His Leu Cys Gly Lys Ala Phe Thr Gln Ser Ser His Leu  
1 5 10 15  
Arg Arg His Glu Lys Thr His  
20

<210> 73

<211> 23

<212> PRT

<213> Homo sapiens

<400> 73

Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr Ser Gln Val Ser His Leu  
1 5 10 15  
Thr Arg His Gln Lys Ile His  
20

<210> 74

<211> 23

<212> PRT

<213> Homo sapiens

<400> 74

Tyr Ala Cys His Leu Cys Gly Lys Ala Phe Thr Gln Cys Ser His Leu  
1 5 10 15  
Arg Arg His Glu Lys Thr His  
20

<210> 75

<211> 23

<212> PRT

<213> Homo sapiens

<400> 75

Tyr Ala Cys His Leu Cys Ala Lys Ala Phe Ile Gln Cys Ser His Leu  
1 5 10 15  
Arg Arg His Glu Lys Thr His  
20

<210> 76

<211> 23

<212> PRT

<213> Homo sapiens

<400> 76

Tyr Val Cys Arg Glu Cys Gly Arg Gly Phe Arg Gln His Ser His Leu  
1 5 10 15  
Val Arg His Lys Arg Thr His  
20

<210> 77  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 77  
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu  
1 5 10 15  
Thr Thr His Lys Ile Ile His  
20

<210> 78  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 78  
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
20

<210> 79  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 79  
Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu  
1 5 10 15  
Ile Ile His Gln Arg Thr His  
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<210> 80  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 80  
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15  
Thr Lys His Lys Lys Ile His  
20

<210> 81  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 81  
Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu  
1 5 10 15

Ile Arg His Gln Arg Thr His  
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<210> 82

<211> 23

<212> PRT

<213> Homo sapiens

<400> 82

Tyr Val Cys Arg Glu Cys Arg Arg Gly Phe Ser Gln Lys Ser Asn Leu  
1 5 10 15

Ile Arg His Gln Arg Thr His  
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<210> 83

<211> 23

<212> PRT

<213> Homo sapiens

<400> 83

Tyr Glu Cys Glu Lys Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu  
1 5 10 15

Thr Arg His Lys Lys Ser His  
20

<210> 84

<211> 23

<212> PRT

<213> Homo sapiens

<400> 84

Tyr Glu Cys Asn Thr Cys Arg Lys Thr Phe Ser Gln Lys Ser Asn Leu  
1 5 10 15

Ile Val His Gln Arg Thr His  
20

<210> 85

<211> 23

<212> PRT

<213> Homo sapiens

<400> 85

Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15

Thr Val His Gln Lys Ile His  
20

<210> 86

<211> 23

<212> PRT

<213> Homo sapiens

<400> 86  
Tyr Lys Cys Asp Glu Cys Gly Lys Asn Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15  
Ile Val His Lys Arg Ile His  
20

<210> 87  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 87  
Tyr Glu Cys Asp Val Cys Gly Lys Thr Phe Thr Gln Lys Ser Asn Leu  
1 5 10 15  
Gly Val His Gln Arg Thr His  
20

<210> 88  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 88  
Tyr Glu Cys Val Gln Cys Gly Lys Gly Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15  
Ile Thr His Gln Arg Val His  
20

<210> 89  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 89  
Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

<210> 90  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 90  
Tyr Glu Cys Gln Asp Cys Gly Arg Ala Phe Asn Gln Asn Ser Ser Leu  
1 5 10 15  
Gly Arg His Lys Arg Thr His  
20

<210> 91  
<211> 23

<212> PRT

<213> Homo sapiens

<400> 91

Tyr Glu Cys Asn Glu Cys Gly Lys Phe Phe Ser Gln Ser Ser Ser Leu  
1 5 10 15  
Ile Arg His Arg Arg Ser His  
20

<210> 92

<211> 23

<212> PRT

<213> Homo sapiens

<400> 92

Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Asn Gln Ser Ser Thr Leu  
1 5 10 15  
Thr Arg His Lys Ile Val His  
20

<210> 93

<211> 23

<212> PRT

<213> Homo sapiens

<400> 93

Tyr Glu Cys Asn Glu Cys Gly Lys Ala Phe Ala Gln Asn Ser Thr Leu  
1 5 10 15  
Arg Val His Gln Arg Ile His  
20

<210> 94

<211> 23

<212> PRT

<213> Homo sapiens

<400> 94

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Gln His Arg Arg Ile His  
20

<210> 95

<211> 23

<212> PRT

<213> Homo sapiens

<400> 95

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

<210> 96  
<211> 22  
<212> PRT  
<213> Homo sapiens

<400> 96  
His Lys Cys Leu Glu Cys Gly Lys Cys Phe Ser Gln Asn Thr His Leu  
1 5 10 15  
Thr Arg His Gln Arg Thr  
20

<210> 97  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 97  
Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp  
1 5 10 15  
Glu Leu Asn Arg His Lys Lys Arg His  
20 25

<210> 98  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 98  
Tyr His Cys Asp Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp  
1 5 10 15  
Glu Leu Thr Arg His Tyr Arg Lys His  
20 25

<210> 99  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 99  
Tyr Arg Cys Ser Trp Glu Gly Cys Glu Trp Arg Phe Ala Arg Ser Asp  
1 5 10 15  
Glu Leu Thr Arg His Phe Arg Lys His  
20 25

<210> 100  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 100  
Phe Ser Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp

1 5 10 15  
Glu Leu Ser Arg His Arg Arg Thr His  
20 25

<210> 101  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 101  
Phe Ala Cys Ser Trp Gln Asp Cys Asn Lys Lys Phe Ala Arg Ser Asp  
1 5 10 15  
Glu Leu Ala Arg His Tyr Arg Thr His  
20 25

<210> 102  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 102  
Tyr His Cys Asn Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp  
1 5 10 15  
Glu Leu Thr Arg His Tyr Arg Lys His  
20 25

<210> 103  
<211> 24  
<212> PRT  
<213> Homo sapiens

<400> 103  
Phe Leu Cys Gln Tyr Cys Ala Gln Arg Phe Gly Arg Lys Asp His Leu  
1 5 10 15  
Thr Arg His Met Lys Lys Ser His  
20

<210> 104  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 104  
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His  
20

<210> 105  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 105  
Phe Ala Cys Glu Val Cys Gly Val Arg Phe Thr Arg Asn Asp Lys Leu  
1 5 10 15  
Lys Ile His Met Arg Lys His  
20

<210> 106  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 106  
Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp  
1 5 10 15  
Lys Leu Asn Arg His Lys Lys Arg His  
20 25

<210> 107  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 107  
Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu  
1 5 10 15  
Thr Arg His Gln Arg Ile His  
20

<210> 108  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 108  
Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

<210> 109  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 109  
Tyr Leu Cys Ser Glu Cys Asp Lys Cys Phe Ser Arg Ser Thr Asn Leu  
1 5 10 15  
Ile Arg His Arg Arg Thr His  
20

<210> 110

<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 110  
Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Ser Ser Gly Ser Asn Phe  
1 5 10 15  
Thr Arg His Gln Arg Ile His  
20

<210> 111  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 111  
Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His  
20

<210> 112  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 112  
Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Leu  
1 5 10 15  
Arg Arg His Glu Thr Thr His  
20

<210> 113  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 113  
Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu  
1 5 10 15  
Ile Arg His Gln Arg Ile His  
20

<210> 114  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 114  
Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu  
1 5 10 15  
Thr Arg His Lys Arg Ile His

20

<210> 115  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Naturally occurring linker peptide

<221> VARIANT  
<222> 3  
<223> Xaa = Glu or Gln

<221> VARIANT  
<222> 4  
<223> Xaa = Lys or Arg

<221> VARIANT  
<222> 6  
<223> Xaa = Tyr or Phe

<400> 115  
Thr Gly Xaa Xaa Pro Xaa  
1 5

<210> 116  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetically generated peptide

<221> VARIANT  
<222> 1, 13  
<223> Xaa = phenylalanine or tyrosine

<221> VARIANT  
<222> 2, 4-8, 10-14, 16, 20, 23-27  
<223> Xaa = any amino acid

<221> VARIANT  
<222> 19  
<223> Xaa = a hydrophobic residue

<400> 116  
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Ser Asn  
1 5 10 15  
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His  
20 25

<210> 117  
<211> 267  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetically generated oligonucleotide

<400> 117  
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cgtataatgt gtggattgt gagcgataa caatttcaca caggaac~~ac~~ag cgtccatggg 120  
taagg~~c~~catac cctaaccctc tcctcgg~~t~~t cgattctaca caagctatgg gtgctcc~~t~~cc 180  
aaaaaaagaag agaaaggtag ctggatccac tagtaacggc cgccagtgtg ctggaattct 240  
gcagat~~at~~cc atcacactgg cg~~cc~~gc 267

<210> 118  
<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> mutated sequence

<400> 118  
Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg Phe Thr Asp Arg Ser  
1 5 10 15  
Ala Leu Ala Arg His Lys Arg Thr His  
20 25

<210> 119  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 119  
Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu  
1 5 10 15  
Arg Arg His Gly Arg Thr His  
20

<210> 120  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 120  
Tyr Thr Cys Ser Asp Cys Gly Lys Ala Phe Arg Asp Lys Ser Cys Leu  
1 5 10 15  
Asn Arg His Arg Arg Thr His  
20

<210> 121

<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> mutated sequence

<400> 121  
Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser  
1 5 10 15  
Asn Leu Thr Arg His Ile Arg Ile His  
20 25

<210> 122  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 122  
Phe Lys Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu  
1 5 10 15  
Val Arg His Gln Arg Thr His  
20

<210> 123  
<211> 24  
<212> PRT  
<213> Homo sapiens

<400> 123  
Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu  
1 5 10 15  
Gln Arg His Val Arg Asn Ile His  
20

<210> 124  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 124  
Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu  
1 5 10 15  
Arg Arg His Glu Arg Thr His  
20

<210> 125  
<211> 23  
<212> PRT  
<213> Drosophila

<400> 125

Tyr Thr Cys Ser Tyr Cys Gly Lys Ser Phe Thr Gln Ser Asn Thr Leu  
1 5 10 15  
Lys Gln His Thr Arg Ile His  
20

<210> 126

<211> 23

<212> PRT

<213> Homo sapiens

<400> 126

Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu  
1 5 10 15  
Asn Val His Lys Arg Thr His  
20

<210> 127

<211> 23

<212> PRT

<213> Homo sapiens

<400> 127

Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu  
1 5 10 15  
Ile Ile His Gln Arg Thr His  
20

<210> 128

<211> 23

<212> PRT

<213> Homo sapiens

<400> 128

Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15  
Thr Lys His Lys Lys Ile His  
20

<210> 129

<211> 23

<212> PRT

<213> Homo sapiens

<400> 129

Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
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<210> 130

<211> 23

<212> PRT

<213> Homo sapiens

<400> 130

Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu  
1 5 10 15  
Thr Val His Gln Lys Ile His  
20

<210> 131

<211> 23

<212> PRT

<213> Homo sapiens

<400> 131

Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

<210> 132

<211> 23

<212> PRT

<213> Homo sapiens

<400> 132

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Gln His Arg Arg Ile His  
20

<210> 133

<211> 23

<212> PRT

<213> Homo sapiens

<400> 133

Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu  
1 5 10 15  
Thr Arg His Arg Arg Ile His  
20

<210> 134

<211> 23

<212> PRT

<213> Homo sapiens

<400> 134

Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu  
1 5 10 15  
Lys Thr His Thr Arg Thr His  
20

<210> 135  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 135  
Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp  
1 5 10 15  
Lys Leu Asn Arg His Lys Lys Arg His  
20 25

<210> 136  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> mutated sequence

<400> 136  
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1 5 10 15  
Thr Gln His Ile Lys Thr His  
20

<210> 137  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 137  
Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu  
1 5 10 15  
Thr Arg His Gln Arg Ile His  
20

<210> 138  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 138  
Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu  
1 5 10 15  
Ile Arg His Gln Arg Thr His  
20

<210> 139  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 139  
Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu  
1 5 10 15  
Asn Val His Arg Arg Ile His  
20

<210> 140

<211> 23

<212> PRT

<213> Homo sapiens

<400> 140

Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Leu  
1 5 10 15  
Arg Arg His Glu Thr Thr His  
20

<210> 141

<211> 23

<212> PRT

<213> Homo sapiens

<400> 141

Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu  
1 5 10 15  
Ile Arg His Gln Arg Ile His  
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<210> 142

<211> 23

<212> PRT

<213> Homo sapiens

<400> 142

Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu  
1 5 10 15  
Thr Arg His Lys Arg Ile His  
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<210> 143

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> putative target sequence

<400> 143

daadaaaath ga

12

<210> 144

<211> 13

<212> DNA  
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<220>  
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<221> misc\_feature  
<222> 10  
<223> n = a,t,c or g

<400> 144  
gyagrahgan ggk

13

<210> 145  
<211> 12  
<212> DNA  
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<220>  
<223> putative target sequence

<400> 145  
hgaardthgag gt

12

<210> 146  
<211> 12  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> putative target sequence

<400> 146  
gragragggg ra

12

<210> 147  
<211> 12  
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<220>  
<223> putative target sequence

<221> misc\_feature  
<222> 7  
<223> n = a,t,c or g

<400> 147  
grahganggg tc

12

<210> 148  
<211> 12

<212> DNA  
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<220>  
<223> putative target sequence

<400> 148  
gragragghh ga

12

<210> 149  
<211> 12  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> putative target sequence

<400> 149  
gavgaaaath ga

12

<210> 150  
<211> 12  
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<221> misc\_feature  
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<223> n = a,t,c or g

<400> 150  
ngggyagraa at

12

<210> 151  
<211> 13  
<212> DNA  
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<220>  
<223> putative target sequence

<221> misc\_feature  
<222> 10  
<223> n = a,t,c or g

<400> 151  
gaagrahgan ggk

13

<210> 152  
<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> putative target sequence

<221> misc\_feature

<222> 7

<223> n = a, t, c or g

<400> 152

gradaanggg tc

12

<210> 153

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> binding sequence

<221> misc\_feature

<222> 10

<223> n = a, t, c, or g

<400> 153

gaagrahgan gg

12

<210> 154

<211> 189

<212> PRT

<213> Escherichia coli

<400> 154

Met Lys Arg Leu Ile Val Gly Ile Ser Gly Ala Ser Gly Ala Ile Tyr

1 5 10 15

Gly Val Arg Leu Leu Gln Val Leu Arg Asp Val Thr Asp Ile Glu Thr

20 25 30

His Leu Val Met Ser Gln Ala Ala Arg Gln Thr Leu Ser Leu Glu Thr

35 40 45

Asp Phe Ser Leu Arg Glu Val Gln Ala Leu Ala Asp Val Thr His Asp

50 55 60

Ala Arg Asp Ile Ala Ala Ser Ile Ser Ser Gly Ser Phe Gln Thr Leu

65 70 75 80

Gly Met Val Ile Leu Pro Cys Ser Ile Lys Thr Leu Ser Gly Ile Val

85 90 95

His Ser Tyr Thr Asp Gly Leu Leu Thr Arg Ala Ala Asp Val Val Leu

100 105 110

Lys Glu Arg Arg Pro Leu Val Leu Cys Val Arg Glu Thr Pro Leu His

115 120 125

Leu Gly His Leu Arg Leu Met Thr Gln Ala Ala Glu Ile Gly Ala Val

130 135 140

Ile Met Pro Pro Val Pro Ala Phe Tyr His Arg Pro Gln Ser Leu Asp  
145 150 155 160  
Asp Val Ile Asn Gln Thr Val Asn Arg Val Leu Asp Gln Phe Ala Ile  
165 170 175  
Thr Leu Pro Glu Asp Leu Phe Ala Arg Trp Gln Gly Ala  
180 185

<210> 155

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 155

ctggaaagaa ccggaagaga tgctg

25

<210> 156

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 156

tgaaacgact cattgttaggc atcag

25

<210> 157

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<221> misc\_feature

<222> 7

<223> n = a,t,c or g

<400> 157

gctgranggg ah

12